

The HARPSICHORD



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HARPSICHORD

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A change of address card must be on file at *The Harpsichord* office in order to receive missed issues, due to address change, without cost.

THE COVER

Frank Hubbard is one of the most prominent harpsichord builders working today. The informal cover portrait introduces a comprehensive illustrated interview with Mr. Hubbard which begins on page 5 and continues for nine full pages.

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ACKNOWLEDGEMENTS

The International Society of Harpsichord Builders is proud to give special recognition to the following Contributing Members whose interest and generosity aid materially in the development and preservation of the instrument and music of the baroque period and assists in furthering the various projects and programs of the Society.

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GO FOR BAROQUE

by Hal Haney



This issue marks the beginning of our fifth year of publishing and I am especially pleased to announce that almost all our Contributing Members have renewed for this new year. This is a tremendous help and we all owe them our deepest thanks. Three new Contributors appear with this issue: Albert Cranwell Jr. of Florence, Alabama; Ronald Hachez of Newport Beach, California and John Stokes of Princeton, New Jersey. We are very grateful for the confidence these new members have placed in us. We are struggling along under difficult financial conditions as we have been from the very beginning and these contributions are a great help.

Our renewal rate has been most gratifying this year. Renewals fall due at the worse possible time of the year, so bless you who manage to find the money and time to take care of this most important job. It is also pleasing to report that a large number of our new members are ordering all back issues and binders to hold them. One complete set was just sent out to Istanbul to Professor David A. Garwood who teaches at the University of the Bosphorus.

The many Christmas cards sent to us by members were put on our bulletin board as part of our decorations. Some members made their own cards and outstanding among these was a numbered and signed original engraving by John E. Overall of Washington, D. C. Harpsichordist Igor Kipnis (now living in West Redding, Conn.) sent an especially beautiful card featuring a full color photo of the

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lower cover of the Lindau Gospels made in the 8th century in Germany of silver, gilt, enamel and jewels. "Peace on Earth" was the most often stressed theme, and we certainly hope that wish comes true this year. A prolonged illness, through the entire Christmas-New Year season kept me from sending out cards or acknowledgements this year so please accept this as a belated "Thank You."

Our good member, Mrs. Richard W. German of Boston, wrote to us and asked if it would be possible to include in *The Harpsichord* a permanent reference section showing where and when instruments are open to view in the major cities. She suggested that it should be like a guide book which would show hours, admission and the name of the collection curator. "I believe this last item to be most important." She said, "Often one must write in advance for admission and this can be very frustrating if you don't have this detailed information in advance."

Mrs. German's suggestion is an excellent one. We have visited cities only to find after our return home that there were several instruments available to the public of which we had no knowledge. While such a comprehensive list would be too lengthy to publish in every issue of *The Harpsichord* it could certainly appear as a bulletin or as part of the index. We believe this is a project which should be handled by the Society as a service to members. If you know of a local museum with a keyboard instrument collection (even if it is very small) please send us the name and address of the museum and, if possible, the director or curator, and we will contact them for details. If you can obtain the details for us, of course this would be most appreciated. In any event, try to get the information in the mail as soon as possible. If everyone cooperates we may be able to compile the data and have it available to members before the summer vacation season. It may consist of only a few mimeographed sheets but it should be most helpful to those wishing to see a cross-section of instruments.

Hal Haney

From LONDON



By Hugh Boyle

Some months ago I spent a delightful day visiting Derek Adlam at his home in Pluckley—a small village that lies in the Weald of Kent. Much of his previous work has been connected with restoration of early pianos—but he has also an eye and ear for those keyboard instruments which preceded the piano and has fairly recently made his first LPs — *The Bach Partitas* — and his first keyboard instrument — a Ruckers muselar.

A muselar is the type of virginal which has its keyboard placed to the right-hand side of its case and plucks its strings much further from the nut, or left-hand bridge, than do those virginals with their keyboards to the left.

Although the building of the muselar was the main subject of our meeting, nevertheless, in the process of our conversation we did touch on a variety of associated subsidiary musical matters, one of which was the effect of the size of keyboards on fingering, etc. During the first part of this particular discussion I learned that while the octave spans of the French builders were considerably narrower than that of the present day piano keyboard, those used by the Italians, Flemish and English were, in general, the same as today's — though a few were quite a lot larger. Further, that in adopting the French octave span, a number of very important modern builders were using a type of keyboard for their instruments which had been the exception rather than the rule.

I thought that this particular topic was of sufficient importance to justify a letter all to itself. So here then, in Derek Adlam's own words, is the rest of the story.

"The keyboard of the Ruckers muselar — in common with most other instruments of its day — has an octave span which is considerably greater than the one which has been made familiar to us by the modern piano. In addition to this the keyboard is much shorter from back to front — its key plates stumpy and its sharps extremely small. My own experience with these keyboards has left me in no doubt that they demand an unusual kind of finger technique — one which is best performed from a relatively high sitting position with the wrist held well above the keyboard, but also one in which the early virginal practice of finger-crossing and the playing of passages of parallel thirds and sixths, etc., is made very much easier. Now, with a low wrist and a narrow keyboard this technique is hard to achieve with any real satisfaction, and even with the standard keyboard of today less difficulty is experienced when the wrist is held a little higher. Of course, the low wrist and slightly lower sitting posture do make it easier to use the thumb-passing technique — so fundamental to all modern keyboard playing.

"This matter of difference in fingering is no mere academic quibble. For whenever you use the middle fingers of the hand — especially in cross-fingering — there is a strong tendency to produce a particular kind of phrasing. The grouping of notes in pairs becomes quite logical and can be done without effort. All sorts of uneven short phrase-lengths become much more obvious and easy to the hand, and the music takes on a completely different aspect. For instance, much of the English virginal music contains extremely long passages of apparently unbroken semiquavers, which, with a modern technique, can be played easily enough in a more or less uninterrupted flow — with practically no articulation. Whereas, in fact, directly you start to use the contemporary finger technique such a line will be found to break up into a very large number of small cells, and you begin to hear

all kinds of rhythmic and melodic implications. Strange phrase-lengths which answer one another are discovered, and many other hitherto hidden fine distinctions are then perceived. Instead of becoming just one long continuous line the whole passage is given a strange asymmetrical grouping, and a very subtle rhythmical character is introduced giving added support and coherence to the line—something which simply was not there while the modern thumb-passing technique was being used.

"This is something that I might never have discovered had I not insisted on using an instrument which was truly contemporary with the music I was playing.

"You can learn just as much from an instrument as you are prepared to give it."

Hugh Boyle

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INSTRUMENT BUILDERS CONFERENCE HELD

by Joseph Norris

During August 20-22, 1971 an Instrument Builder's Conference was held at Windam College in Putney, Vermont under the sponsorship of the Summer Collegium in Early Music. This event attracted some twenty-five builders and their instruments who participated in lectures, demonstrations and small informal discussion groups where ideas and designs were reviewed in an atmosphere of relative trust and enthusiasm.

The speakers included Harold Westover, small organs and a variety of other instruments; Allen Betz, lutes; Durwood Crocker, lutes, vielles; Manouk Papasian, lutes, guitars; Bob Smith, lutes; Don Warnock, string instruments; James Ludden, organs; Bob Cooper, lutes; Jim Rickard, guitars; Sandy Lemburg, recorders; Bob Marvin, recorders; Joseph Norris, harpsichords; Howard Everngam, harpsichords; Walter Burr, harpsichords.

The topics of the speakers were quite varied and covered discussions of pitch standards, electronic testing of instruments, construction practices, design, problems of stability and evaluations of exact copies of old instruments.

A time was set aside for speaking individually with the builders and examining their products. Several formal concerts were presented for us to enjoy but one could, at any hour, find several groups in rehearsal or playing for their own amusement in several locations. Although he didn't present a formal talk, Frank Hubbard made valuable contributions during the discussions. Friedrich Von Huene was present on the last day to talk with participants and present his slide lecture on old instruments he has seen in Europe.

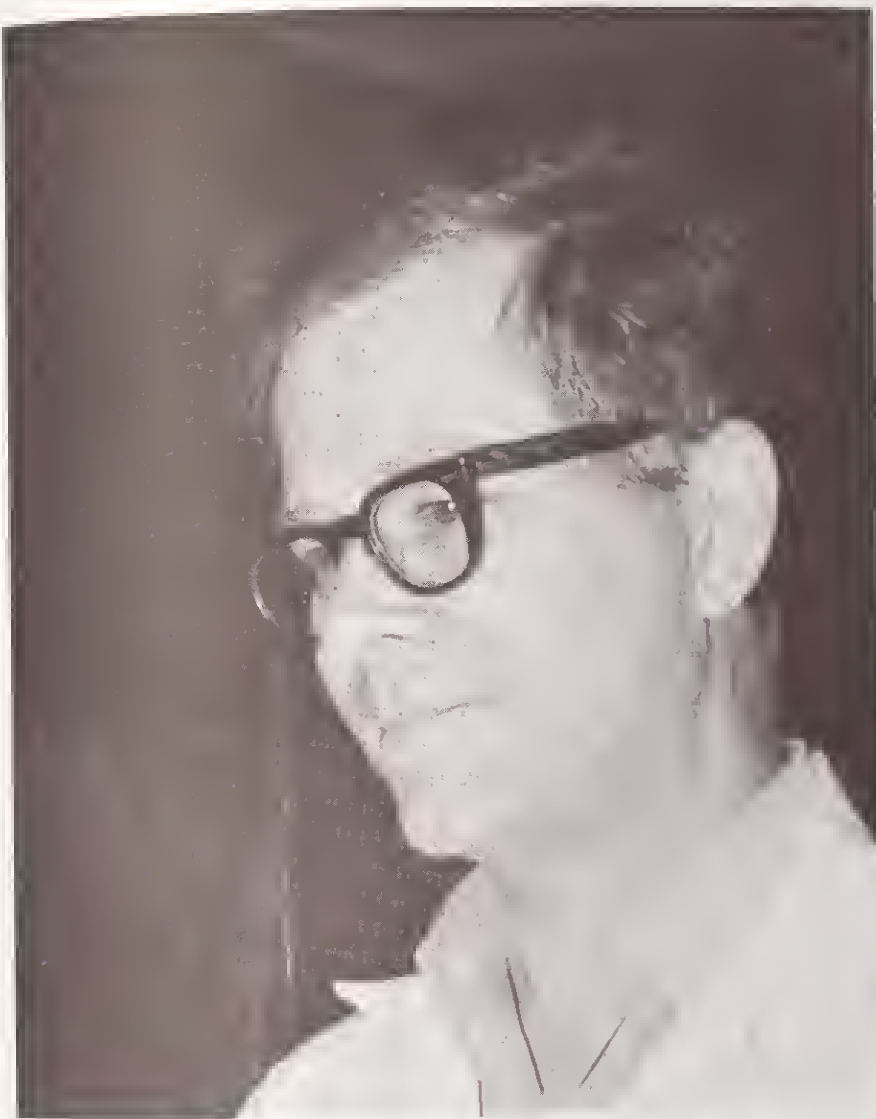
The success of such a conference depends largely on the quality of the participants and on their quantity as well. Quality was very much in evi-

dence. A variety of lutes was shown, some staggering in their beauty and workmanship. Since the conference came at the close of "lute-song week" at the Collegium, special emphasis was placed on the plucked instruments. Unfortunately only two harpsichord makers had instruments to display. It is expensive to transport such a large instrument long distances and one's work schedule is likely not to provide the right instrument at the right time for exhibition, but there may have been an unspoken reluctance to display their work on the part of the harpsichord builders. Nevertheless, it was apparent during the conference that the problems of the builders overlap, no matter what their instrument happens to be and that inspiration of fine workmanship carries from one trade to another.

The main shortcoming of the conference was quantity. We missed a variety of interested performers to comment on our work and provide both questions and answers concerning our problems. We missed having different kinds of harpsichords to examine. While the facilities of the conference were not elegant, they were adequate to their purpose and it would be tragic if this beginning did not lead to a larger and more successful conference next year. As for 1971, the gathering proved the benefits to us all of simply getting together. One must take this opportunity to commend Mrs. Lou Silverstein who organized the conference and took care of us during our stay at Windam College. As a personal note, I urge you who did not attend to overcome your fears, your reluctance and hesitation and your inertia and definitely make plans next year to attend a weekend of appreciation for your work and performing abilities, your enthusiasm, your education, and for fine music making at the 1972 Instrument Builder's Conference in Putney, Vermont.

Joseph Norris
Philadelphia, Pa.

PORTRAIT *of a* BUILDER



FRANK HUBBARD, Waltham, Mass.

It is sometimes assumed that everyone knows of Frank Hubbard. I can remember a day when I did not know of Frank Hubbard . . . but it is pleasant to report that my days have been fuller and richer after I learned of the tremendous amount of research and investigation Mr. Hubbard has done in the field of harpsichords. His book *"THREE CENTURIES OF HARPSICHORD MAKING"* published by Harvard University Press in 1967, has become one of the universal guide books to instruments of the past.

Frank Hubbard and his former partner William Dowd are both referred to as the "Ruckers of the modern harpsichord." Frank was born in New York City in 1920, but his current home, while less than 250 miles from his birthplace, is light-years away in atmosphere and tranquility.

While the name Frank Hubbard is often used in conversation, few people have had the opportunity to sit down quietly and talk with him in his own surroundings. That's what I set out to do.

Waltham, Massachusetts is a long way from Denver and it took a number of letters and phone calls to set up the appointment. The train ride from Boston to Waltham was beautiful, even in the winter when trees are bare.

When I arrived at the Waltham station at a pre-arranged time, I called Mrs. Hubbard and she came to the station and picked me up in a small, foreign station wagon. Mrs. Hubbard is an active and attractive woman who was very instrumental in getting me an appointment with Frank. I had talked with Hubbard the night before, double checking on the appointment time, but when I was introduced to him, he hadn't the slightest idea who I was or why I was there.

Taking a deep breath, I reintroduced myself, told him of *THE HARPSICHORD* and of our appointment which had been set up for about a month in advance. I started to pull out of my briefcase the file of correspondence which had been built up when suddenly the blank expression left his face and was replaced by a slightly embarrassed, but very broad smile.

"Of course" he exclaimed. "Please forgive me. I am so often being approached by kit builders and curiosity seekers that it's difficult to know whom I am meeting next."

With much relief, I put back the correspondence file and we took a tour of his shop.

The building is a 2-story structure which had been a barn. It is a beautiful building and has been designated as an historic landmark. Hubbard's house is just a few steps away and it too is listed as an historic landmark. Both of these buildings belong to the same estate and are set in a lush grove of trees. It was winter when I visited the grounds and while I was taking exterior pictures, a rabbit hopped out of the woods into



The multiple sweeping curves highlight the beauty of design of a Hubbard harpsichord. the clearing and watched every move I made!

The interior of the shop is large and rambling. Parts of the building were unheated and quite cold. The large beams, rough wooden floors and narrow twisting stairs gave an old-world atmosphere to the building.

Hubbard's shop is certainly not an assembly line operation. There seemed to be a very easy and informal atmosphere which suits the wide range of employees. While Hubbard wore a neat white lab coat, the rest of the staff kept warm with bulky-knit Mexican sweaters; lumberjack shirts worn over long-sleeved underwear; army fatigues; and much long hair.

Several rooms were devoted to the kit business. Three or four kits were waiting shipment and several orders were ready to be filled. The walls were lined with neat bins which held a wide assortment of kit parts.

Other rooms contained supplies of rough, aged lumber, partially complet-

ed instruments, an office, and one large room which held several completed instruments. This room also contained four chairs and four music stands arranged in a circle. These are used by Hubbard and his friends for chamber music. Hubbard has played violin for many years and enjoys continuing this avocation when the shop closes for the night.

After meeting his employees, all of whom speak several languages (not necessarily including English) we walked to his home which is about as charming a dwelling as anyone could possibly want. It is cheerfully furnished in a bright, early New England style. We held the interview in the dining-room which contained a number of original drawings from Hubbard's book. These superb illustrations were done by Frank L. Hubbard, Frank's father.

I was impressed with the beautiful silence of the room. Only the quiet hum of a little electric wall heater could be heard as I turned to Frank Hubbard and asked him to tell us how his interest in harpsichords developed.

FRANK HUBBARD: Well, this goes back to when I was an undergraduate in college. Claude Jean Chiasson was

giving a concert at the Fine Arts Museum in Boston. Malcomb Holmes was playing violin and Mr. Chiasson, harpsichord. I went to that concert and I remember being very impressed. They played on a 1798 Kirckman that is still in the museum.

HANEY: What happened to introduce to you the thought of building a harpsichord?

FRANK HUBBARD: I was in graduate school in Harvard, my field was English, and I discovered that my interests were historical. I enjoy the process of historical research and uncovering unknowns. In English history, just about everything which can be known about a writer or period is already known.

I had a stall in the Harvard library which is in the section reserved for music and there were many books around me which had to do with the history of musical instruments. I was an amateur violinist and had an interest in violin making and started to think in terms of the history of musical instruments. Not necessarily harpsichords, but all musical instruments.

Bill Dowd was an undergraduate student at Harvard at the time I was a graduate student. We had known



Every day about a dozen employees go to work in this beautiful old building, where they make Hubbard harpsichords, restore old instruments or prepare kits for shipment. Picture the same spot in the summer when the New England sun filters down through green trees and the grass is lush and dark. A wonderful setting for any creative work.



This view from the front of the shop, shows Frank Hubbard's house which is only a few steps away.

each other since we were boys. He had an interest in harpsichords at that time so we gradually got more and more involved and we decided that we could establish our own shop and provide all antique instruments. Everything from the krumphorn to the baroque organ. In preparation for that I went off to England for several years and worked with Dolmetsch and Dowd went out to Detroit and worked several years with John Challis.

HANEY: What made you decide to go to England and that Dowd would go to Detroit?

FRANK HUBBARD: It was simple. I had been in the Army and had saved up some money and could afford to go to England. Dowd was still a student so he stayed in this country.

HANEY: Did you find it difficult to get a job with Dolmetsch?

FRANK HUBBARD: They were quite kind to me. I was inexperienced and worked for them for two years for nothing. They generously waived an apprenticeship fee, so I did not have to pay them to work for them. At least that was true in my case. Also, I suspect that since this was just after the war they were short of men. I worked only with harpsichords, I didn't do anything with recorders or other stringed instruments.

After working with them, I went to Hugh Gough, who was working in London at that time. I worked with him for another year.

Then Dowd and I came back to the south end of Boston, this was in 1949, and began. We stayed together until 1957 or 1958 when I bought Dowd out and he went into business for himself in Cambridge.

HANEY: When you were working with Dolmetsch, did you see various construction methods which you felt should be changed?

FRANK HUBBARD: There were some instruments there under restoration which I saw and heard so it was perfectly apparent to anyone that the ones Dolmetsch was making neither looked nor sounded like the ones they were restoring. What I learned from Dolmetsch was basically woodworking. I didn't take any of their design concepts.

HANEY: Wasn't opening a harpsichord shop a rather daring move?

FRANK HUBBARD: Well, we starved too. We still are starving for that matter. We started with four harpsichords and four clavichords. Before any of those instruments were finished, they were all sold. And since that time we have always had a backlog of orders. We got into it at the right moment.

At that time, no one in the world had the idea of making instruments which resembled old ones. There must have been a strong, latent market for this for the minute we started making them people came to buy them. By now things have developed that there are two wings of the harpsichord movement . . . the modernist and the antiquarianist. What our friends and enemies call the "Boston school" has certainly had a definite influence on the antiquarian wing. Right here in the Boston area we have five or six builders who are working in this manner. There are others in other locations, almost all of whom have worked with Dowd or me, or both of us.

HANEY: Why do you think it has taken so long for people to recognize the quality of antique instruments?

FRANK HUBBARD: We have to go back to the history of the revival. The earliest instruments which were influential were the ones Pleyel was making. Nobody at Pleyel had any historical interest. They reasoned backwards as piano makers, how would one make a plucked piano. And that's what they did.

They were very fortunate in finding Landowska to promote their instruments. It was a triumph in my opinion to find anything whatsoever to do with that Pleyel instrument, but



The woman in Frank's life, Mrs. Frank Hubbard, keeps the office running smoothly and adds a bright spot of feminine charm to an otherwise all male shop.



Not all instruments in Hubbard's shop are new. Here antique jacks are being requilled before they go into a restored harpsichord.

she did, and did it well. She established it as an instrument and established a style of playing in a viable tradition. If she hadn't done that probably the revival would have never taken place at all, so one can't attack it. On the other hand, we have been struggling against it ever since, gradually weeding out the rank growth.

HANEY: I believe you primarily build French instruments. What led to this choice?

FRANK HUBBARD: Well, that's what I'm doing now, but I have made French, Flemish, German, English and Italian style instruments, and when one gets down to it, what else is there? I seem to be concentrating now on French instruments in the sense that they are central. I think the French musicians were possibly more aware of the harpsichord for its own sake and interested in it as an instrument. In other countries, such as Germany, it was a medium for music, but I don't think they were deeply involved with the instrument. I think this fact makes the French harpsichord, the French literature and the French style of making, the central one. That would be the first instrument you would revive if you were going to revive the most important style.

Today, players have turned more toward the 17th century when it comes to the selection of music. I believe we are going to find a change in the emphasis. In the 17th century there was this ground wave of Italian harp-

sichords. They were everywhere all over Europe. Either made in Italy or made in the Italian style. Especially in Germany they were making instruments which resembled Italian instruments very closely. Because of this fact, I think the Italian instrument will become more important. Also, I think a different style of French instrument will have to be made. The 17th century instrument.

I think that the 17th century will become known as the high baroque and the 18th century as the rococo.

HANEY: I have been told that you never build an instrument with a 16' stop. Why?

FRANK HUBBARD: First of all, that is not quite true. We built one based on a Haas in 1955 or 56. Dowd and I designed it and started it. Then I went off to Europe to do research for my book and while I was gone, Dowd finished it. Actually Dowd did most of the actual construction. That's the only one I ever made. Dowd has made several since then, but he has had his initial impressions corroborated and has sworn off as well.

HANEY: What are the reasons behind your attitude?

FRANK HUBBARD: I simply don't like it. I don't argue for a minute that

it didn't exist. I would argue violently that it is vastly exaggerated. After all, only a few instruments have survived with 16 foot. They all come from the 18th century and they are all German. There is an exception, there is one in France made by a man called Joachim Schwann late in the 1800's and he obviously was a German. He was working in the German tradition and I don't consider that a French harpsichord. There is an instrument by Joseph Merlin, late 18th century English, but it is a wild instrument with a piano attachment, a music writing attachment and what not. Those are the only two exceptions I can think of. So you are faced with a very small percentage of even the surviving German harpsichords which have 16 foot stops.

The German harpsichords were frequently made by organ builders working in off time. And I think the 16 foot is exactly that . . . it is an organ concept being imposed on the harpsichord.

To my ear, when the 16 foot comes on, it muddies up the texture, and makes a turgid kind-of quality. The last thing which needs reinforcement in the harpsichord is the bass in any case. I can't think of a single time



Hubbard's talented hands work on a buff-stop strip. Notice the unique positioning of the tuning pins. They are laid out to conform to the keys they represent. In other words, the accidentals are further back than the whole notes. This serves two purposes. (1) Each tuning pin has more space around it which reduces the possibility of a split or cracked wrestplank and (2) tuning is faster since one can tell by the position of the tuning pin what note it is.

when I have heard the 16 foot played that I hadn't wished the artist would turn it off.

In addition, I believe you must compromise the 8 foot tone in order to put on a 16 foot choir. Unless you have a scale which is out of all proportion to anything which ever existed in the past you don't have room for the 8 foot bridge in the treble. You must crowd the 8 foot and the 16 foot together and this spoils the 8 foot sound. Then you have the 16 foot dampers rumbling along even when you are not playing the 16 foot. Also, it makes the instrument much more complicated, much bigger and uglier. And more expensive. I find that nothing can be said for it. I realize that there are a lot of people who disagree with me.

HANEY: How did you determine what thickness and what material to make your soundboards?

FRANK HUBBARD: Basically what I have done, first, is try to form my ear. This is a matter of examining a lot of old instruments to try to see what they were driving at. I have listened to as many old instruments as possible. Then, what I have tried to do, is build my instruments to capture the essence of what they were after. My idea was to make instruments which do not necessarily resemble any single old instrument but which fall within the middle of the tradition as any given maker would have defined it.

In direct answer to your question, we begin by making an exact copy of an exact instrument, then modify it in later versions. This could involve thinning the soundboard or using various materials. The exact material used by early builders is not that clear. If you submit samples of wood to botanists it turns out that there are simply no identification techniques which can tell you exactly what species of which conifer it is. They will all probably say it is spruce but there are many different species of spruce. Violin makers will claim that the side of the mountain its grown on is very important.

We've tried making soundboards out of two species of spruce and one of fir. I think that is important, but I think the most important qualities in designing a harpsichord are those which can be defined in a plan view of the instrument. The string, length, plucking point, spacing of the bridges on the soundboard, etc. After that, comes the basic construction which involve the thickness of the soundboard and of course how it is ribbed. How heavy the case is, how much enclosed volume there is in the case. And after all that, the exact species of the wood.

Herz and Challis have demonstrated that an instrument sounds surprisingly like itself with the widest variety of materials for soundboards. Challis' metal soundboards still sound like Challis' harpsichords even though for years he built only soundboards of wood. This indicates to me that the plan view is very important. Challis has probably altered that to some extent to compensate for his metal board but still he is making Challis' having made this enormous change. Herz who has gone over to a soundboard laminated with fiberglass in the middle, or sometimes a veneer in the middle with spruce on the outer surfaces is still making instruments which sound like Herz instruments.

HANEY: You believe then, that the soundboard has been given an undue amount of attention and that the total design of the instrument is of prime importance?

FRANK HUBBARD: Yes. We have made some rather crude experiments to try to determine the role different parts of the soundboard play. By putting a weight, for example a hammer head, on the bridge you can change the tone. If you put it right over the string you take all the fundamental out. By putting the weight at different points around the soundboard and listening, when you determine a change, you have obviously touched a section of the soundboard which is affecting the overall tone. If you can put the weight down in a location and

there is no appreciable difference in sound, then you can assume that that particular section of the soundboard is not doing that much. It turns out that if you play a note, middle range of the harpsichord, you can put the weight anywhere on the bridge, pretty much, and detect a change. Especially going down toward the bass, all the way you can hear it. So immediately you would say that the sound is propagated all up and down the bridge. Now if you move off to the side of the bridge you'll discover that it will only go an inch or two away from the bridge and beyond that it is going zero. So, obviously, the sound is up and down the length of the fibers and some across the grain which is very quickly absorbed. This would indicate that only that part of the soundboard near the bridge is really vitally important. I suspect that what you do with the ribs, located at a great distance from the bridge, really doesn't matter much at all.

HANEY: Some builders, build instruments to the artist's specifications. Do you do this, or do you offer a certain number of types of instruments and limit it to that?

FRANK HUBBARD: I have a list of instruments which I am prepared to make, but I am also prepared to negotiate. However, I won't make an



The surgical wrapping on this man's hands is for protection. He is stringing a Hubbard harpsichord. The wire is wrapped around the palm of the hand so it can be pulled firmly after the string is placed on the hitch pin. The string is then wrapped around the tuning pin and tapped into the pin block. The surgical binding gives protection to the palms yet keeps the fingers free and unencumbered. Gloves would be too bulky.

(continued on page 14)

HARPISICHORD

of NOTE

THIS beautiful virginal was built in 1617 by Giovanni Battista Boni while he was living in Cortona, Italy. This ancient town, located in Tuscany and which was confederated with Rome as far back as 310 BC, was one of a dozen important Etruscan cities. While this virginal was made more than a dozen centuries after the Etruscan's civiliza-

tion collapsed, the Etruscan's enthusiastic love for music is well documented and could have easily been passed down to succeeding generations. Art also flourished in Cortona and the artists Fra Angelico and Luca Signorelli were both there. Their works can still be seen in churches in the area. It is not surprising then, that a magnificent musical instrument, beauti-



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fully decorated, should come from Cortona.

While this particular instrument has been both listed and described in other publications, its beauty and complex key arrangement makes it important enough to bring this information together here.

One is first impressed by the deli-

cate painting both inside and outside the case. The outside is covered with graceful cartouches which, at first glance, look like inlay. The base boasts an almost perfect mirror-image design which starts with the two flowers under the keyboard and radiates outward to the corners of the stand. The background of the instrument is dull black and the cartouches are executed

in a soft Rembrandt gold which may have started out as a warm white.

The inside lid introduces a riot of color and shapes. Graceful birds both rest and fly among an endless garden of wild flowers and berries. A family coat of arms dominates the circular center panel which is done in

(continued on next page)





brilliant red, green, gold and blue. The lid appears to be made up of four separate panels, each mounted behind a strip of moulding, but this is an intentionally created optical illusion. The lid is perfectly flat. This art style, *Trompe l'Oeil* (which means to fool the eye) was widely used throughout the baroque era and into the 19th century, Michelangelo's Sistine Chapel ceiling is probably the best known example of this type of delightful deception. Some 20th century critics condemn *Trompe l'Oeil* as tasteless imitation, yet its visual impact can not be denied. Its use on this instrument is particularly modest.

Of extreme interest is the keyboard. Six keys are split which permit 12 different pitches to occupy the usual space of six keys. There are two separate tuning arrangements represented on this instrument.

The first is a form of short-octave tuning. Since chromatic notes in the lowest octave of the keyboard were not often needed in early music, they were simply not built into the keyboard. (See illustration)

In a typical short-octave, the bottom key, which would normally be E, is tuned to C. F-sharp is then tuned to D and G-sharp is tuned to E.

Of course, this precludes the use of F-sharp and G-sharp for anything other than D and E. With this instrument, The F-sharp and G-sharp keys are divided into two sections. The back half plucks F-sharp or G-sharp as usual, but the front half plucks D and E, giving both a short octave and a normal key arrangement.

Moving on up the keyboard we find four more split keys. Two are D-sharp and the other two, G-sharp. This provides for enharmonic tuning. The most popular system of tuning at the time was Meantone, which can create some problems. Scales



distant from C can often be out of tune. (See *Meantone Tuning*, Dr. G. Sargent, Vol. 1, No. 3, pg. 16, 1968, *The Harpsichord*.) This particular instrument, and some others built around the same time, divided those keys so that one half of the D-sharp key could be tuned to E-flat and one half of the G-sharp key could be tuned to A-flat. William Dowd of Boston built an instrument in 1965 which not only split D-sharps and G-sharps but C-sharp as well. (A mis-captioned photo of the Dowd instrument appears on pg. 14, Vol IV, No. 1, 1971, *The Harpsichord*.)

These small instruments were very popular and were owned both by families of modest means as well as royal families. There is one slight mechanical disadvantage with this type of instrument. The key tongues of the bass notes are quite short, while the tongues of the treble keys are four or even five times longer. This creates some internal design problem in order to assure equal key pressure and response. Another disadvantage is the jack arrangement which places the jacks in slots mortised out of the soundboard. This has a tendency to amplify the sound of jack movement. This can cause clatter if the jack adjustment is not precise. Leather bushings were sometimes used to reduce this undesirable feature.

This particular instrument is being preserved for us by the United States National Museum (Smithsonian) in Washington, D.C. and all the photographs used were purchased from their collection. Hal Haney

GO-BAR DECK AIDS AMATEUR BUILDER



Joe Jopling and his daughter, of Ft. Worth, Texas, are building a Burton bent side instrument and they have found that the Go-Bar deck, often used by professionals, can be adapted for use by the kit builder. In a letter to the Society, Mr. Jopling writes:

"I was especially glad to read your good words about Mr. Burton. My daughter and I are building a Burton harpsichord. We have enjoyed the building experience as well as the mail and phone contacts with Herb. We had some minor problems but, I imag-

ine, no more than is normal with a project of this type. All have been resolved quickly and satisfactorily by Herb or one of his most capable staff.

"With regard to kit construction, we used a procedure for bridge installation that you might like to pass along. Maybe there is an easier way, but the kit builders I talked to all had difficulty with this step.

We marked the bridge locations on the soundboard, applied glue to the bridges and laid them on the marked locations. $\frac{1}{8}$ " x $\frac{3}{4}$ " ripping cut 2 to 3 inches longer than the distance from

the bridge to ceiling were then bent into place between the bridge and ceiling. We used sharp cypress, but the material and length is not critical. We cut "V" notches in the ends and taped them to preclude marking the bridges which were painted. This allows precise positioning without using locating pins, dowels or screws. Sufficient pressure can be generated to assure a good bond. Excess glue is easily removed because no bulky weights are used.

After the glue had set, we drove the pins, turned the soundboard over, blocked the under side and installed the ribs and hitchpin rail using the same set-up.

If you are working in an apartment or house and do not want to scratch the ceiling, this same procedure will work under a heavy table with the soundboard on the floor."

Joe Jopling

VOICING IMPROVEMENT FOR NEW PLECTRA

By Rev. Ronald Dahlheimer

Since I wrote the article, NEW PLECTRA (*The Harpsichord*, Vol. IV, No. 1) I have discovered that a change in voicing the clerical collar improves the quality of tone. This involves a simple job of changing the basic shape of the plectra, over that which was recommended in the original article. The illustrations below show the difference in the cut. Drawing A shows the shape I first used. Drawing B shows the new, improved shape which works well with all instruments, but has proven especially beneficial when used on spinets with slanted jacks.

Make the cuts by dividing the plectra into thirds, then cut the slanting shoulders. Making the cuts in this order will help keep all plectra uniform.



PORTRAIT OF A BUILDER

(continued from page 9)



Experienced hands work on a moulding which will later become the finishing touch to a Hubbard instrument.

instrument I don't like or I don't approve of. For two reasons. First of all, if you don't like something you can't make it. The second point is that in the future, no one will know that I built a certain instrument because someone wanted it that way. They could not possibly know that I was really not responsible for it. Also you end up spending your life making things you don't want to make. I am a prisoner here so I want it as pleasant as possible.

HANEY: What do you think of pedal harpsichords? Have you made any?

FRANK HUBBARD: I haven't, but there is no question that the instrument existed and in more countries than one. I can immediately think of traces of it in France, England and Germany. The usual argument against it is that it was just a practice instrument for organists. But I think you could counter that argument by saying that even if it was only a practice instrument for organists the fact that these composers spent so much time playing this instrument must have affected their musical thought. Surely some of the things they composed on the pedal harpsichord, and played at home on their pedal harpsichord, must be appropriate for that instrument.

Of course, the instant one thinks of a pedal harpsichord often one would believe that there is now a reas-

on for a 16 foot stop. I don't see that at all. The disposition I would give it would be different. I would put it under a two-manual double 8, and 4 harpsichord and I would give it two 8 and 4. I think what you want is great clarity of line and the last thing you want is a great muttering roar at the bottom. If you had any solo stop, I would give it a lute stop. Another thing I would do is *not* make an A.G.O. pedal board. It seems to me it is tiresome to repeat the same old mistakes. At one time it was absolutely unthinkable to make a keyboard with any dimensions different from the piano. All the Pleyels had piano keyboards and you just wouldn't do this. Now, no one in his right mind makes a harpsichord with a piano keyboard. I believe the same thing about the pedal harpsichord. I am going to build some and I am not going to repeat those same old mistakes, by starting off with an A.G.O. pedal board.

HANEY: You will use a flat board?

FRANK HUBBARD: Yes. The American organists all raise their hands in horror, but the fact is their European colleagues play all kinds of pedal boards without difficulty at all.

HANEY: You are planning to produce pedal harpsichords?

FRANK HUBBARD: I am designing one now for my kit. I need a post graduate course. People make a two-manual harpsichord then they come to me and want to know where they go from there. I'm designing a two 8 and one 4 pedalboard harpsichord which will go under one of my two manual kits. I have already arranged for an organ builder friend of mine to make some pedal boards.

HANEY: When would it be all right to release the information that you are going to do this?

FRANK HUBBARD: It's all right now because the pedalboard has already been laid out. He is working on them now so I'm on the hook . . . I have to do it. There are a lot of people who will snort; who will say What's that! and so on but I think

it is a viable thing. The thing that impressed me was the number of 17th century French musicians who owned such an instrument. You always think of it as typically German instrument, but the fact is that it wasn't only that. The one pedalboard which has survived which might have been originally under a harpsichord is Italian. There are many instruments, of course, which have traces of pull-downs, and this pedal board that probably activated those pull-downs. There is no trace, to my knowledge, of a separate pedalboard harpsichord. There are many descriptions of them but no surviving examples.

HANEY: Why do you think there are no surviving examples?

FRANK HUBBARD: Well, they were always rare. Since these perhaps represent only 1% of the instruments built and probably 95% of all the instruments built have been destroyed that little one percent has just been wiped out. One may turn up some day.

HANEY: What led you to the kit idea?

FRANK HUBBARD: (laughter) Money! There are really several things. To begin with I was hounded by amateurs who wanted to make their own harpsichords and came around for advice and I found myself repeating the same things over and over again. Then too, my natural bent in harpsichord making is somewhat experimental and fussy in nature and I am not very well psychologically equipped for mass production. I got married and was starving to death so it seemed to me that this kit might turn out to be a meal ticket which would subsidize making harpsichords and that's exactly what it is.

In addition, I found the problem interesting. The problem of designing an instrument and methods of making it which an amateur could build without too much experience and training. I enjoyed working that out.

Our initial plan was to supply everything that was either hard to make or hard to get but not to waste money shipping big panels of plywood around. The basic kit supplies the curved pieces of the case, the wrest

plank, hitch pin rail, soundboard, bridges, all the action parts, wire, tuning pins, felt, glue, etc.

HANEY: *If I may interrupt for just a moment, what kind of glue do you use?*

FRANK HUBBARD: Well for many years we used regular hide glue, the type you keep in a glue pot, but I have found that this type bond that the Franklin Glue Company makes is extremely strong and doesn't stain which is the disadvantage of most synthetic glues. For most of our operation we use the Franklin glue. There are a few things on which we need a very slow setting glue like the bent sides where you just don't have time to put it together with that faster glue we use a glue put out by U. S. Plywood. Occasionally, for special things, we use hide glue. The greatest advantage of hide glue is that it is very nice about not staining. Also, it sets to a tack very quickly. Thirdly, it is brittle. You can give it a knock with a hammer and it will break loose. This is especially helpful in restoration work. Most people think you soak glue off. You don't. You give it a sharp tap and they break apart.

HANEY: *Let's go back now to the kit itself.*

FRANK HUBBARD: What I outlined is the basic kit. But I then found that there were some customers who weren't convenient to a source of the right kind of materials. For those who are we supply all the basic parts. Then, for those who are less adept as cabinet makers we offer an assembled case. This is the most expensive form of the kit.

HANEY: *Where are you going to go from here? Are you going to continue to build kits as well as market completed instruments?*

FRANK HUBBARD: Oh yes, I think so. Of course, I have taken new interests. I recently became more and more involved in the revival of the baroque violin and I have restored a few violins to their original condition. Also I have made quite a lot of baroque violin bows. I recently bought

myself a beautiful violin built by Jacob Stainer who worked in the mid 1600's with the idea of returning that to its baroque configuration.

I find it rather strange that of all the instruments from the baroque probably the central instrument of all was the violin. Except for solo keyboard music there is no baroque music which does not have a violin and the violin is the instrument which has been least revived. The modern violin with its modern strings and modern neck and modern bow and all the rest sounds very different from the violin of earlier periods.

HANEY: *I notice that all your harpsichords appear to be painted. Is this because the early French instruments were always painted?*

FRANK HUBBARD: We try to stay within the general area of variation of decor of the style of their building. I don't imitate the most florid baroque ornamentation. Some people don't like it and in addition to that, it is very expensive. What we usually do is choose one of the simpler decors which was in use during that period. But in any event, I do paint, or paper my

French and Flemish instruments.

HANEY: *The decorative lid latches on the side of your French instrument were used a great deal on English instruments. Did the English get this from the French or did it happen the other way around?*

FRANK HUBBARD: The curious thing about hardware on English harpsichords is that I have never seen an identical casting used on any other piece of furniture, but all the harpsichords have it. It was specific to English harpsichords in the mid 18th century, or even earlier. I have never been able to find out who made it for them or why they were never used on chests or other pieces of furniture. Now, on an instrument like the one here, there are all sorts of fantasies you can apply to it. You can say that this was a Flemish instrument which migrated to London. And, in fact, this did happen. We are now restoring a Ruckers which lived in England. It now has an English ivory keyboard, English jacks and slides and it is on an English trestle stand. As a matter of fact, almost all Ruckers instruments have accumulated accretions of decor that have nothing



This curious tool is an important part of Hubbard's shop. It permits gluing the separate pieces of a soundboard at one time. The carefully prepared wood is laid on the rack (one board is shown in place). Glue is then placed on the edges. The top rack made of 10 bars (shown leaning to the left of the picture) is then locked in place over the wood and 9 screw clamps, operated by the cranks on the right, pull the glued edges together for a secure bond.



Two completed harpsichord cases are ready for shipment to kit builders who will complete the instruments with simple hand tools. Hubbard's kits are available in many conformations from plans and hardware only to these completed cases.

to do with 17th century Flanders.

HANEY: We are often asked by sincere young people where they can go to learn how to build harpsichords. How should we answer that question?

FRANK HUBBARD: Obviously you have to go to a maker. One of the reasons that there is a resistance to taking on apprentices is that many of these people really aren't serious. In order to make a harpsichord properly you have to be well educated. In order to do it intelligently you have to read more than your native language. You have to have a historical perspective which means you must have a knowledge of European history, the history of art and so on. A high percentage of the people who come to us now are college drop-outs. That already is a bad start. There are exceptions of course but they are rare.

In any case, they ought to first prepare themselves in this way. They should know several languages. Then they ought to face the fact that they are not going to make a lot of money as apprentices. One does not expect to make a lot of money while going to college. This should also apply when apprenticing. Now I'm not an exploiter. I *could* draw myself up to full height and tell them that I worked for nothing for two years and expect

them to do the same. I don't. On the other hand it is not reasonable to expect a professional builder to pay \$3 or \$4 an hour to someone you are teaching. When you do take them on at lower wages you must accept two things. One is that you must give them a variety of work so they learn something. It's only fair. And also, you have got to recognize the fact that since they are a higher type than a wage slave they are not going to stay with you forever. Once they learn what they want to know they are going to leave. You have to recognize that and not be jealous of them and freely give them all the information you can.

For example, right now I have a Belgian working in the shop who is going back to set up his own shop. He has been here two years now. He came to me as a piano technician with a diploma from Brussels so he knew all about tuning and voicing keyboard instruments before he came. He had done some woodworking and his whole family are musicians. His father is professor of music so this apprentice had a very good background in music. He is a good example of what an apprentice should be.

Another one who has been with me is now working on a restoration

in Paris. He was a harpsichordist from Montreal and had studied with Kenneth Gilbert, Leonhardt and Isolde Ahlgrimm in Vienna. He spoke three languages and was a cultivated, intelligent player when he came to me. He worked for several years. Now he is going to make instruments of his own.

The big, bushy fellow upstairs has a Ph.D. and is a brilliant guy. He is very gifted as a painter and able to do excellent work. He is an intelligent, cultivated fellow who is genuinely interested. He is going to make a first class harpsichord maker.

So there are three of the sort which I would say are good apprentices because they are seriously interested in becoming harpsichord makers. But too many people who come to us are in rebellion against society for reasons that I can literally understand, so they go into harpsichord making as an escape not because they are deeply interested in the instrument. The first thing is to make oneself the right kind of guy, then I think he could find himself an apprenticeship.

I have many apprentices who come from Europe. In Europe, you know, American harpsichord making is thought of in terms of antiquarian instruments. The paradox is that America, who has always been thought of in assemblyline terms is now producing accurate reproductions, while Europe is mass producing instruments. On the world-wide scene, the American antiquarian instruments have been a greater influence than the modern American instruments. The very fact that I was imported to Europe to work there is significant. I've had apprentices from Germany, Switzerland, Belgium, France, etc. These people don't go to modern instrument makers in Europe. They come over here.

HANEY: Have you any philosophies pertaining to your life as a builder that you would share with us?

FRANK HUBBARD: I would say that I see myself faced with a body of music that, of course, is part of the period in which it was composed. Inevitably the exact nature of the com-

poser's thought is tempered by the image he lives, the concept of art and man and world that are current to him. Therefore I am required to make an effort of the imagination to try to reconstruct this music which, at this time, only half exists. It exists on paper but it does not exist in sound. In order to bring most music to life, there are really three efforts involved.

First is that of an editor who sorts the music out and gets down what really was on paper. Second is that of a performer who examines the performance practices of the period and attempts to bring it to life in those terms and, third, that of a maker who attempts to supply instruments suitable to the music. We are obviously dealing here with a minute fraction of the minds that existed in the past. We are dealing with the best composers of all times and the arrogance which is involved in saying 'well I can cook up something in my back kitchen that will improve his music' is ridiculous.

This man, this composer from the past, had a talent greater than anything I will ever have. He used the means at his disposal in an imaginative way that staggers my imagination. Therefore, the only word I can apply is arrogance to the people who feel they can devise a harpsichord more suitable to his music than the instrument he had, because he wrote his music for that harpsichord. That's why I feel so strongly that one should attempt to return to the original instruments.

Some people think this is a sterile sort of thing; that you just measure a lot of sticks and make a lot of sticks exactly like them, but this is not true. It requires an enormous imagination to see exactly what maker and composer and performer were driving at. Unless you understand that the things you do are meaningless, you are going to make damn fool mistakes. Look at any Japanese copy of an American device before they understood it. The copy was always ridiculous. Furthermore, just look at copies of furniture. You can always specify

exactly what period a copy was made unless the man really understood what he was making. In order to make perfectly good copies, you *must* understand all these things. To enter the past to this extent is anything but sterile it is extremely creative. This is essentially what I am trying to do. To do my part in reviving this music. And every so often I see that people are making steps in this direction. Some-

one like Leonhardt comes along who has a completely new approach when compared with early 20th century approaches, to let's say, the unmeasured preludes of Coupenin or the very free 17th century music. There are now groups of musicians approaching this music much as it was approached during the time it was written.

I think, to put it very simply, I want to be a part of that revival.



This large, 2-manual, Hubbard-designed instrument was built by Douglas Barclay of Santa Fe, New Mexico and is owned by Hal Hancy. The case is finished in rare and beautiful woods after the fashion of early English instruments. The music desk and key-board surround are of birds eye maple inlaid with exotic multi-colored banding. The board surround are of solid walnut, can be dismantled in 30 seconds so the entire instrument can be easily transported in a station wagon. The soundboard presents a profusion of flowers and leaves, plus an intricate rose surrounded by oil portraits of three Muses; Euterpe, Erato and Terpsichore. While this instrument is not exactly representative of the average Hubbard kit, it is an excellent example of the type of instrument which can be built by a talented craftsman using Hubbard's plans and hardware.

LETTERS

The letters used in this column are representative of a cross section of the correspondence received by *The Harpsichord*. Neither I.H.S. nor this publication, accepts responsibility for the accuracy of statements printed here. The opinions expressed are those of the correspondent and do not necessarily reflect the opinion of this publication.

Dear Mr. Hancy:

I have received my first copy of *The Harpsichord* and I am pleased as punch but there is one fly in the oatmeal. The first item to meet my eye was the one on electronic tuning. To me this is like waving a bull in front of a red flag. I hate these instruments with a deep and abiding faith, even though I have one of the big thirteen window strobes.

Actually, my aversion is not for the instruments themselves, but the mis-use by charlatans and misconceptions generated by salesmen and writers. Of the many, many articles I have read on electronic tuning I don't recall one which mentions the real culprit in tuning stringed instruments, and that is string inharmonicity. I can spot a strob tuning a block away and with one ear tied behind my back, and no doubt the inharmonicity factor is what Mr. Challis heard as per your article.

I have no desire to insult your intelligence by insinuating that you know nothing about string inharmonicity, however, I do think that you may tend to associate it with scale design rather than tuning, so I'll simply remind you of the first principle.

Consider a Hz 220. The second partial is theoretically Hz 440, but actually (due to the node) sounds at about Hz 442, and this is where the "A" must be tuned to sound right. The strobe has no way to compensate for this, so in a complete tuning, the octave above the temperament will be flat, next octave up, flatter, the next flattest. The top does not count because the decay rate is so fast that no one can read it. Octaves below temperament are progressively sharp.

Floyd R. Walton
Registered Craftsman
Piano Technician's Guild
Phoenix, Arizona

Dear Mr. Haney:

I have evidence (and you may already know) that an unscrupulous off-set-litho publisher in the United States has announced his intention (without consulting me) of reprinting the 1st edition of my *MAKERS OF THE HARPSICHORD*.

When I learnt this, I wrote to him and refused my permission. I had a reply, interim, saying their director would write to me after Mid-November. He has not done so.

If a facsimile of the 1st edition is issued, readers would be best advised *not* to buy it, as it is so out of date, incomplete, with many mistakes, etc., and my new edition should be in the hands of the Oxford University Press by the summer. The new edition is much more accurate and greatly enlarged, and with a new set of plates.

Donald Boalch
Oxford, England

Dear Hal:

I read with interest your article on electronic tuners. We have been selling the Conn job for some years now, although we strongly discourage people from gadgets.

Several years ago I fell upon a simplified system for tuning equal temperament and we have been recommending it exclusively to the kit customers ever since.

The system is based not on counting beats but absence of beats, and requires no counting of anything. It is certainly the simplest method of tuning I know of and thousands of customers seem to be having less trouble with it than they did with the old instructions based on beat counting.

The essence of the method is that the narrowed fifth of equal temperament does not have a beat that is perceptible unless you wait for it. So by taking a circle of fifths near the middle of the keyboard, tuning the fifths up perfect and then setting them down slightly, and taking octaves down perfectly, you come around to the last fifth in the circle — which tests the whole circle. If the last fifth is narrow and is not beating, then you have applied a vernier caliper to your entire

temperament. If the last fifth is wide, then you have not been setting the fifths narrow enough. If it is too narrow, then you have set the fifths too narrow. To correct this, you can go backwards around the circle, taking the octaves up and the fifths down, adjusting the fifths from the lower note.

This method of tempering for equal temperament is fast. In practice it is more accurate than counting beats on thirds and sixths (and much more accurate and fast than trying to count beats on fifths.)

The speed of decay of harpsichord tone (which should be fast in the treble when compared with a piano, for instance) and the complexity of overtones, makes beat counting difficult, especially for beginners. This no-beat system seems to be much less confusing for the beginner.

Keep up the good work with the magazine.

David J. Way
Zuckermann Harpsichords, Inc.
New York City, N. Y.

Dear Mr. Haney:

I am a new reader to your magazine and enjoy it immensely. Unfortunately, through no fault of your own, it has gotten me into a problem with an instrument which I think Harpsichord readers should know about.

Recently, as a result of an ad in your magazine, I ordered a "simple" kit clavichord sight unseen from Williams Workshop in Calif. I was looking for a winter project in clavichord building that would be easier than the famous Zuckermann instrument. As the Williams instrument is smaller and looks simpler than the Zuckermann, I decided to take a chance and order one. I wanted an easy to build instrument as I have never made one before.

After waiting 2½ months for delivery (5 weeks promised), the Williams clavichord finally got here. After studying it for several weeks, I am forced to conclude that this instrument was never designed for kit construction, and should *only* be undertaken as an advanced cabinetmaking project. In almost every step of the manual,

special tools and woodworking knowledge are called for. What Williams has done is substitute your labor for that of the factory, which is fine if you have woodworking tools and knowledge approaching that of the factory.

The following is a list of things that are required to complete this kit: (1) 4' bar or pipe clamps, (2) drill 1" holes in frame of instrument, (3) adjust frame (while gluing) 'til it is perfectly square, cut and fit diagonal cross brace, (4) the soundboard supports are apparently cut undersize and do not fit snugly; the soundboard is apparently cut oversize and must be cut back after installation, (5) the frame must be planed and shaped square before gluing the sides on, (6) the bottom is cut oversize and must be planed down, (7) the pin block must be drilled (not before assembly in a drill press) but after gluing into the instrument, requiring a drill press with an oversize table to hold the instrument, or some special rig ("arm of radial arm saw with a jig to hold a drill press head"), (8) the pressure board is glued up of 2 pieces of dissimilar wood, with a ragged edge in between so it cannot be finished natural, (9) the bridge is also supplied undrilled, and the guide pin holes have to be drilled, not on a drill press before installation but by hand after the instrument has been assembled, (10) depth of holes is not given for tuning pins, guide pins, or hitch pins, (11) miters have to be cut and fitted when the sides of the instrument go up, (12) in short, the cabinet is not pre-cut to size and must be fitted and planed together, (13) it is necessary to use special glue blocks, glued onto the outside face of the instrument, to hold the miters together while gluing (later cut off), (14) it is not stated if the sides should go on flush with the bottom, (15) no instructions are given for finishing the instrument, (16) easier construction techniques, if they exist, are not offered in the manual.

Needless to say, I am sorry that I ordered this kit, because it requires a lot of skill and judgment to put together. The parts are not pre-cut to size, as in other kit instruments.

To top it off, Williams refuses to give a refund because he feels his kits are for "dedicated do-it-yourselfers who wish to have an instrument at a cheaper price by substituting their own labor for ours", although this is *not* stated in his sales literature. In this day and age, don't you think that the wood for the kit should be cut to size in the factory, where special tools and knowledge are readily available?

Mr. Williams also has the gall to suggest to me — by mail, of course — that I "enroll in a night high school wood shop where instructions and tools are available" in order to build the kit. I did not think it would be necessary to learn cabinetmaking in order to build a kit.

I am writing this to you because maybe other readers who are not cabinet-makers may be considering this kit and should be advised that it is not for an amateur. For anyone expert enough to handle it, mine is available at a loss.

Sincerely,
John Grauer
Great Neck, N. Y.

Dear Mr. Haney:

"A little learning is a dangerous thing." No doubt Mr. George K. Huber (*The Harpsichord*, p. 22 Vol IV, No. 3) knows the quotation as well as I do; it is as well at times to act upon it, and to tread cautiously. There can be very few amateurs of old keyboard music who do not know that Viennese pianos (grand or square) were instruments designed differently from the English pianos of the period (grand or square). The musicians of the Europe of that day knew this as well as we do; however, they were in the composing and music publishing business to make a living, and therefore laid out their compositions to be equally (even if differently) effective on both types of instrument. It must also be remembered that London, the musical mecca of that day, had many amateurs as purchasers of imported printed keyboard music. And Broadwood's were then the foremost piano makers in the world, with a very large export business to the Continent and the colonies.

I myself have always regarded the Viennese instruments as inferior to the English, but it seems to me nonsense for anyone to say that Clementi's music would be an "overblown farce" (whatever that may mean) on a Viennese instrument. And as to "disregarding historical evidence", does not Mr. Huber know that Beethoven himself had, and used, one of Broadwood's "English" grand pianos?

F. H. Miller
Dorking, Surrey, England

Dear Mr. Haney:

Enclosed, please find my check for this year's membership fees. We are deeply grateful for all the work you are doing for the promotion of the harpsichord and harpsichord music through the Society. My wife and I are co-partners along with Philip Cucchiara in the Cucchiara Harpsichord Co. We not only build what we believe to be flawless copies of the work of Pascal Taskin, but we also sell the very fine instruments of William de Blaise of London. Our work is made much easier as a result of the research you and your associates have done on antique instruments. The fine detailed photos in the center spread section are of particular value to us in planning future copies of historical instruments.

Our shop is located in an old school building in Nelson Township about 30 miles from Cleveland. Our address is actually R.D. 2 Box 275, Garrettsville, Ohio. We have made use of most of the building for shop space and a chamber music hall. We are hoping to use the hall for workshops in early music as well as holding harpsichord master classes which will be open to the public. We are also planning for a Cleveland Chapter of the Harpsichord Society. We plan not only to have master classes in performance but want to hold workshops in harpsichord maintenance as well as sponsor research into harpsichord construction of the past. The possibilities are almost endless for a group such as this. Thank you again for your efforts and your time.

David Pierce
Garrettsville, Ohio

The Harpsichord — 19

THE SUBJECT IS ROSES

by John E. Overall

The soundboard rose I carved for my Zuckermann 6' instrument was made from some strips of Basswood which I had in my studio. These were glued edge to edge forming a square of 5 inches. The design was worked out on a piece of tracing paper, which was lightly glued to the surface. The diameter is just over 4 inches. The design was then cut out using an Xacto knife with a No. 11 blade (which was later used for voicing). Any rough spots were taken off with a Swiss needle file.

As the Zuckermann instrument has a laminated soundboard, a circle the same size as the rose was cut through the top laminate, and then the other two laminates were cut slightly smaller, allowing a step for gluing the rose.

After painting the flowers on the soundboard, the entire soundboard was then shellacked. The rose domed upwards after the shellac was applied, apparently due to some moisture in the shellac. Needless to say this worried me a bit. Fortunately, as the shellac dried, the rose flattened out.

The instrument has two 8' choirs of strings. On one rank of jacks I have Delrin plectra and the other has leather. This gives me both a nasal tone as well as a bell-like tone. On the whole, it is a most satisfying instrument — except for the lack of a second keyboard.



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